

In the Claims:

1. (Currently Amended) A plant expression cassette, which comprises a 5' cauliflower mosaic virus 35S promoter operably linked to a nucleic acid encoding a glutamine synthetase protein and a 3' NOS terminator sequence, wherein said nucleic acid encodes glutamine synthetase from gymnosperm, and expression of said cassette in a plant increases nitrogen metabolism in said plant.

2. (Currently Amended) The expression cassette of claim 1, wherein the glutamine synthetase coding sequence is from gymnosperm *Pinus sylvestris* having ~~Genbank Accession No. X69822~~ the sequence of SEQ ID NO: 3.

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Currently Amended) The expression cassette of claim 1, wherein said glutamate synthetase sequence is selected from the group consisting of:

A) a nucleic acid sequence that is at least 70% identical to ~~Genbank Accession No. X69822~~ SEQ ID NO: 3 and encodes a protein having ~~enzymatic function~~ glutamate synthetase activity;

~~B) a nucleic acid sequence that encodes a protein that is at least 70% similar to Genbank Accession No. X69822 and encodes a protein having enzymatic function;~~

CB) a nucleic acid sequence that hybridizes to Genbank Accession No. X69822 SEQ ID NO: 3 at moderate stringency with hybridization in 6X SSC, 5X Denhardt's solution, 0.5% SDS and 100 µg/ml denatured salmon sperm DNA at

42°C, and washed in 2X SSC and 0.5% SDS at 55°C for 15 minutes and encodes a protein having ~~enzymatic function~~glutamate synthetase activity; and

DC) a nucleic acid sequence that is ~~Genbank~~
~~Accession No. X69822~~SEQ ID NO: 3.

8. (Previously Amended) A vector comprising the expression cassette of claim 2.

9. (Previously Amended) The vector of claim 8 which is an *Agrobacterium* binary vector.

10. (Original) The vector of claim 9, wherein the vector is pBIN19.

11. (Original) The vector of claim 10, which further comprises the neomycin phosphotransferase II coding sequence.

12. (Previously Amended) A method of producing a transformed Poplar plant by transforming *in vitro* said plant with the expression cassette of claim 2.

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Previously Amended) The method of claim 12, wherein the plant is the hybrid *Populus tremula* X *P. alba*.

17. (Canceled)

18. (Currently Amended) The method of claim 12, wherein the ~~said plant is transformed~~ transforming is by infection

~~with an *Agrobacterium tumefaciens* vector comprising a nucleic acid encoding glutamate synthetase mediated transformation.~~

19. (Canceled)

20. (Previously Amended) A transgenic plant produced by the method of claim 18.

21. (Previously Amended) An isolated reproductive unit from the transgenic plant of claim 20, said unit comprising a nucleic acid encoding heterologous glutamine synthetase.

22. (Previously Amended) A cell from the transgenic plant of claim 20, wherein said cell comprises a nucleic acid encoding heterologous glutamine synthetase.

23. (Canceled)

24. (Canceled)

25. (Canceled)

26. (Canceled)

27. (Canceled)

28. (Canceled)

29. (Previously Amended) The transgenic plant of claim 20, which is a hybrid of *Populus tremula* X *Populus alba*.

30. (Canceled)

31. (Canceled)

32. (Canceled)

33. (Canceled)

34. (Canceled)

35. (Canceled)

36. (Canceled)

37. (Canceled)

- 38. (Canceled)
- 39. (Canceled)
- 40. (Canceled)